Conflict resolution in passive formation

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Abstract

In this paper we will argue that a typology of passive formation can be derived from the optimality-theoretic interaction between three well-known constraints. These are the Extended Projection Principle (VP must have a subject), Stay (do not move) and Parse (elements from the input should occur in the output). The analysis will not only account for different forms of passives (personal passives versus impersonal passives) but also for languages which lack passives (of certain verbs or altogether). To account for this we employ the so-called null parse, a candidate without structure.

1. Introduction

Languages differ significantly in the way they form passives. On the basis of intransitive verbs, either an impersonal passive is derived or no passive at all results. Passivization of transitives results in a personal passive, an impersonal passive or is impossible altogether. However, not every combination of possibilities occurs. For example, there seems to be no language with impersonal passives of transitives that lacks passives of intransitives.

In this paper we will argue that a typology of passive formation can be derived from the conflict between a few well-known constraints, which is resolved in an optimality-theoretic fashion. Besides offering an explanation for the attested typology, the paper will also show that fears about overgeneration in optimality theory are misguided. This is for two reasons. First, different rankings may select the same output as optimal. Second, an output without any structure, the so-called null parse, may be more successful than other candidates.

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In Section 2 we will discuss the notion of constraint interaction and introduce the constraints that play a role in passive formation. In Section 3 we will argue that different rankings of these constraints result in an adequately restrictive typology. Section 4 contains the conclusion.

2. Relevant constraints

A fundamental property of passives is that the external Θ-role of the verb is no longer available for the subject position. The absence of a Θ-role for the subject position poses a problem, given the requirement that this position be filled (in GB-theory expressed by the Extended Projection Principle, EPP). As already remarked in the introduction, languages differ in the way they solve this problem. Some use NP movement, some do not allow passives, and, as we will argue, some allow the EPP to be violated.

Below we will discuss three constraints that determine how the problem posed by a passive input is solved in a particular language. First we will briefly discuss some preliminary assumptions concerning optimality theory.

2.1. Conflicting constraints

In traditional grammars facts are derived by a conspiracy of principles, but the principles themselves do not compete. No principle is violated in order to avoid violation of another principle. In fact, no principles are violated at all in a grammatical sentence.

Optimality theory (cf. Prince and Smolensky, 1993) proposes a radical breach with this traditional view. The theory consists of two components. The first is a device, called GEN(erator), which determines how elements can be combined into a structure (perhaps using operations like Merge and Move, cf. Chomsky, 1995). The demands that GEN imposes on structures cannot be violated. The second component is an evaluation metric that chooses from the output of GEN the structure that best satisfies a set of universal constraints. These constraints are all violable, and their impact in a specific language follows from their ranking and collective evaluation.

Evaluation proceeds as follows. The structures to be compared (which make up the so-called candidate set) are first evaluated with respect to the highest-ranked constraint. In the event of a tie, the remaining candidates are judged by the next highest constraint, and so on. As a consequence, no constraint is necessarily surface true. A lower ranked constraint can be violated in an optimal form when this form scores better on a higher ranked constraint than its competitors. Even the highest-ranked constraint can be violated, namely in case there is no potential output that does not violate it.

Obviously, evaluation of candidates is only possible if a definition of the set of competing structures (the so-called candidate set) is given. Following work by Grimshaw (1995), Grimshaw and Samek-Lodovici (1995) and (in a different framework) Golan (1993), Reinhart (1995) and Fox (1995), we assume that sentences

belong to the same candidate set if they are projected from the same set of lexical items (the same numeration) and target equivalent semantic representations. The idea is that the syntax is a mapping device between the lexicon and semantic representations. The mapping can take place in various ways, yielding various derivations and thus various candidates. The optimal candidate is the representation that best satisfies a number of ranked constraints that operate at one point in the derivation.

Let us consider what the relevant candidate set for passives is. We assume that passive morphology is attached to the verb presyntactically and that it is assigned the verb's external Θ-role (cf. Jaeggli, 1986, and Baker et al., 1989). Given the definition of candidate sets mentioned above, passive sentences do not compete with active ones, since the latter do not contain a verbal form derived by passive morphology in the numeration. The constraints to be introduced in the following section therefore will decide between various realizations of a passive input, but not between a passive and an active input. The absence of passives in certain languages therefore cannot follow from competition with active sentences.

Passive morphology brings with it a certain semantics such that not every verb can be passivized (see, for instance, Zaenen, 1993). Similarly, unaccusatives seem to resist passivization systematically (cf. Perlmutter, 1978). These properties of passive we cannot discuss in this paper,[1] but it it should be borne in mind that, if we claim below that a certain type of passive is possible in a language, we do not mean that it is possible for every single verb.

Let us now introduce the constraints that govern the syntax of passives.

2.2. EPP

The classical analysis of NP raising in passives holds that this process is triggered by lack of case for the object DP, the assumption being that a past participle absorbs the structural case of the base verb (Chomsky, 1981). This is often related to what has become known as Burzio's Generalization (Burzio, 1986), according to which the properties of not assigning a subject Θ-role and not assigning objective case always go hand in hand. It is generally agreed, however, that Burzio's Generalization is stipulative in nature.

Moreover, doubts have been cast on the idea that lack of case is the trigger of NP-movement (cf. Marantz, 1991; Weerman, 1992; Burzio, 1994). One problem concerns the fact that the arguments of nouns can be rescued from remaining caseless by the insertion of a preposition. It is unclear why it is impossible to use this option in order to rescue the object argument in a passive construction:

(1) a. the murder of the president
    b. *___ was murdered of the president

Even if one assumes that *of*-insertion, for some reason or other, is impossible in verbal contexts, it can be shown that the problem remains. If a preposition is selected independently, NP raising is still necessary, as shown by pseudo-passivization:

[1] For discussion on the nonpassivizability of unaccusatives see Ackema (1995: 198–202).

(2) a. Many people talk [about this actress]
b. *___ was/be talked [about this actress] by many people
c. This actress$_i$ was talked [about t$_i$] by many people

As noted by Marantz and others, sentences like (1b) and (2b) are ruled out regardless of case considerations by the requirement that sentences must have a structural subject, expressed in GB-theory by the EPP. NP raising saves a structure headed by a passive verb from violating the EPP. The EPP therefore can be taken to be the trigger for NP raising.[2]

At this point, the question should be raised which elements satisfy the EPP. In particular, the circumstances under which expletives can satisfy the EPP must be clarified. This issue in essence concerns the question whether subjects should be defined structurally or thematically, as discussed in Williams (1980), Stowell (1981) and subsequent work. What we propose is a system based on a thematic definition of subject (much as in Williams, 1994, and Neeleman and Weerman, 1996). Simplifying things somewhat, we assume that VP is an inherently anaphoric category, in the sense that it must be A-bound:

(3) *EPP*
VP must be A-bound

Binding relations in general can only be established if they receive a meaningful interpretation. The binding of inherently predicative categories like VP must be interpreted as a relation of predication. However, VP can only function as a predicate if it contains an open thematic position, interpreted as a variable. In the case of transitive and unergative constructions this variable is the verb's external Θ-role. In the case of raising constructions, it is the trace in object position.

Returning now to the issue of expletives, it follows that expletives with an associate can satisfy the EPP, whereas expletives without an associate cannot. The reason for this is that the associate raises at LF and adjoins to the expletive (cf. Lasnik, 1993, and Chomsky, 1995). The trace left behind by this operation provides the variable necessary to license predication. If there is no associate, no predication relation can be established and hence no A-binding of VP is possible.

Consider now the Dutch and German impersonal passives in (4). It is clear that at no level of representation, not even at LF, is there a thematic variable that can license A-binding of VP. This means, crucially, that impersonal passives do violate the EPP.

(4) a. Er wordt in de tuin gedanst
there is in the garden danced

[2] In some constructions an underlying object can be promoted to subject without A-movement (although A-movement is always a possibility). Examples are nominative-dative inversion in the Germanic OV-languages (cf. Den Besten, 1985) and the possibility that the argument of an unaccusative verb remains in situ in pro drop languages like Italian (cf. Rizzi, 1982). We will ignore this complication here.

b. Es wurde im Garten getanzt
it was in-the garden danced

In fact, it has been argued before that impersonal passives are really subjectless sentences. As pointed out by Siewierska (1984), most languages with impersonal passives do not insert an expletive at all.

In those languages which do have an expletive in impersonal passives, this element indeed is inserted for other reasons than to satisfy the EPP. This is straightforwardly shown by the fact that in German the expletive appears only to satisfy the V2 constraint. It occurs exclusively in first position in main clauses. Whenever some element is topicalized or when the V2 constraint does not play a role (viz. in embedded clauses), insertion is prohibited, see (5). (We would like to thank Vieri Samek-Lodovici for drawing our attention to these facts.)

(5) a. Es wurde im Garten getanzt
it was in-the garden danced
b. Im Garten wurde (*es) getanzt
in-the garden was (it) danced
c. (Er glaubte) dass (*es) im Garten getanzt wurde
he believed that (it) in-the garden danced was

Note that it is implausible to assume that in the examples in (5b) and (5c) a *pro* subject satisfies the EPP. If in German *pro* could be an expletive, one would expect the sentence in (6) to be possible as a declarative main clause, given that it satisfies the V2 requirement through this element.[3,4]

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[3] The distribution of expletives in Dutch impersonal passives is largely identical to that in German. Again, expletive insertion is only obligatory when the V2 constraint must be satisfied through it. The difference with German is that *er* 'there' appears optionally in embedded clauses and in clauses with topicalization:

(i) a. *(Er) werd in de tuin gedanst
(there) was in the garden danced
b. In de tuin werd (er) gedanst
in the garden was (there) danced
c. (Hij dacht) dat (er) in de tuin werd gedanst
(he thought) that (there) in the garden was danced

The difference between Dutch and German in this respect might be related to the different expletives that are used. German *es* 'it' is a pronoun, which violates the Θ-criterion if it does not receive a Θ-role. It can therefore only be inserted if insertion avoids violations of higher-ranked constraints. Dutch *er* 'there' is an adverbial, with a certain presuppositional semantics. Insertion of this element therefore does not violate the Θ-criterion, but is regulated by pragmatic conditions, as argued by Bennis (1986).

[4] The subject *es* of a weather verb can never be omitted in German, not even when the V2 constraint is satisfied otherwise. We think that the reason for this is that weather verbs assign a Θ-role to their subject (cf. Chomsky, 1981) and therefore the subject is not a real expletive (see also Bennis, 1986). Evidence comes from the fact that this subject can control and from its appearance with clear thematic predicates such as *kalt* 'cold' in *es ist kalt heute* 'it is cold today'. Also, in Dutch the form of the subject of a weather verb is *het* 'it', not adverbial *er* 'there' (cf. footnote 3).

(6) **pro* wurde im Garten getanzt
was in the garden danced

Bennis (1986: 213) concludes that facts like these confirm "the theory in which there is no subject position as a general property of clauses. Acceptance of the Extended Projection Principle would lead us to adopt unnecessary, unmotivated and unattractive assumptions". Although this conclusion is valid for German and Dutch, it is not valid for English, given that English lacks subjectless sentences like in (4) and (5). Bennis (ibid.: 273) therefore claims that in English finite clauses a nominative position must be projected, which must obligatorily be filled. In effect, this means that the EPP does hold for English.

This situation illustrates that principles like the EPP must be parametrized in theories that do not allow for constraint violation. The consequence is that the EPP must be satisfied by all sentences of a language or in no sentence at all. This is unattractive, however, since the EPP does seem to be valid in other constructions in German and Dutch. In particular, it accounts for the fact that, if an underlying object is present in a passive, it must be promoted to subject. German and Dutch do not have impersonal passives of transitives:

(7) a. *Gestern ist [$_{VP}$ uns geschlagen worden]
yesterday is us hit been
b. Gestern sind wir$_i$ [$_{VP}$ t$_i$ geschlagen worden]
yesterday are we hit been

As argued above, NP-raising is not triggered by case requirements, but by the EPP. Hence, this principle must be active in German, although it is violated in passives of intransitives.

This is exactly the type of situation expected in optimality theory. The EPP, like other constraints, is universal. It is present in every grammar, including that of German. However, its effects can only be observed if higher ranked constraints allow this. So, a constraint can have its effects in some constructions while being overruled in others.[5]

2.3. Stay

As discussed in the previous section, the EPP requires that a clause has a subject. However, it does not say anything about the question which DP will actually be promoted in a passive. In this section, we will discuss a constraint that bears on this issue. The pertinent constraint is the one that disfavours (overt) movement, well-known from the literature. Following Grimshaw (1995), we formulate this constraint as an absolute ban on movement (cf. (8)). We interpret Stay in such a way that each

[5] For other constraint interactions involving the EPP (or a similar 'Subject' constraint), see for instance Grimshaw (1995) and Samek-Lodovici (1996).

node separating a trace from its antecedent results in a violation (cf. Ackema and Neeleman, 1996).

(8) *Stay*
Do not move

The constraint in (8) favors movement of that DP that is closest to the subject position, since this DP makes the shortest move.[6] The effects of this constraint in passives can be illustrated with data from English (as argued in Neeleman and Weerman, 1996).

Consider first the ungrammaticality of superraising in passives. Constructions in which a subject intervenes between a raised DP and its trace are ungrammatical (cf. Chomsky, 1986):

(9) a. $[\text{Mary}]_i$ was made $[t_i$ to dance the samba$]$
b. *$[\text{The samba}]_i$ was made [Mary to dance t_i]

It will be clear that the ungrammaticality of superraising can be seen as a result of Stay. The DP in (9b) makes a longer move than the one in (9a). Given that NP raising is driven by the EPP, and not by lack of case, there is no reason to believe that passive participles lack the ability to assign structural case. Hence, (9b) cannot be ruled out by case theory.

The effects of Stay are not restricted to superraising. Consider passivization of dative constructions:

(10) a. John showed some pictures to Mary
b. *$[\text{To Mary}]_i$ was shown some pictures t_i by John
b′. $[\text{Some pictures}]_i$ were shown t_i to Mary by John
b″. *$[\text{Mary}]_i$ was shown some pictures to t_i by John

There are three ways in which a passive sentence can be formed on the basis of (10a). In the first, the PP appears in subject position. This representation is ruled out independently, because PPs cannot be subjects (see Neeleman, 1996, for discussion). This leaves (10b′) and (10b″) as possibilities. Stay favors the former. As shown by Barss and Lasnik (1986), the Theme argument can bind into the dative PP, but not vice versa. This suggests a structure in which the Theme is generated higher than the PP (cf. Larson, 1988). Hence, movement of the Theme is more economical with respect to Stay than movement out of the dative PP.[7,8]

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[6] It has been argued for WH-movement as well that, in case more than one WH-expression can be moved, it is the one closest to the landing site that is selected to move. As argued by De Haan (1979), Golan (1993) and others, this explains superiority effects.

[7] Even if the dative PP is generated higher than the Theme DP, movement out of this PP would probably be less economical. In (10b′) a complement of the verb is raised, while in (10b″) the promoted argument is a complement of a complement of the verb. Suppose the PP is generated one node higher than

Another construction for which Stay can be shown to be relevant involves examples in which a verb selects a complex DP. In such constructions, either the complex DP as a whole or the argument contained in it can in principle be promoted. Again, Stay selects the representation with the minimal chain, in this case the one in which the entire complex DP is raised:

(11) a. John bought [a book about Lenin]
b. [A book about Lenin]$_i$ was bought t_i by John
b′. *[Lenin]$_i$ was bought [a book about t_i] by John

Stay can only play a role if the constructions to be compared score equally well on higher-ranked constraints. This has some interesting consequences. The examples in (10) showed that promotion of an argument contained in a PP-complement is blocked if the verb also selects a DP-complement. But if the verb selects only a PP, the situation changes. There no longer is an alternative that could block promotion of the argument contained in the PP, since raising of the PP to subject position is impossible for independent reasons. Hence, pseudo-passivization of constructions like (12a) is allowed (compare (12b′) with (10b″)):

(12) a. John looked [at the problem]
b. *[At the problem]$_i$ was looked t_i by John
b′. [The problem]$_i$ was looked [at t_i] by John

ECM complements present a final example of a representation being allowed if a competitor that better adheres to Stay is independently ruled out. The passive of an ECM verb is derived by promotion of the embedded subject. This might seem unexpected, since promotion of the entire clausal complement would minimize movement. However, such a derivation is not wellformed, because it would leave the ECM subject without case. A longer movement is therefore necessary:

(13) a. Almost everyone expects [John [to become prime-minister]]
b. *[John [to become prime-minister]] is expected t_i by almost everyone
b′. [John]$_i$ is expected [t_i [to become prime-minister]] by almost everyone

This evidence shows that Stay can be used to explain the locality of NP raising in English passives. Given the universality of constraints in OT, it must be assumed

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the Theme DP. Then the data follow if the complement of the preposition is dominated by both a P′ and a PP node.

[8] Stay also selects the indirect object as the argument to be promoted in double object constructions. Barss and Lasnik (1986) have shown that the indirect object c-commands the direct object. NP raising from the direct object position therefore would result in a longer chain. For English, this is correct:

(i) a. John showed Mary some pictures
b. [Mary]$_i$ was shown t_i some pictures by John
b′. *[Some pictures]$_i$ were shown Mary t_i by John

In other languages, though, it is the Theme argument that must be promoted. This is probably due to intervening thematic constraints on subjects, which conflict with Stay (see for instance Woolford, 1993).

that this condition is active in other languages as well. In fact, we will see that Stay in a number of languages has a more dramatic effect than in English: it suppresses raising to subject completely.

2.4. Parse (Passive)

Before we can discuss the third and last constraint that affects passives, we must first return to the issue of what is in the candidate set. Recall that two syntactic representations belong to the same candidate set if and only if they are projected from the same numeration and correspond to equivalent semantic representations.

If semantic equivalence is part of the definition of candidate set, it must be established when two candidates can be said to be semantically equivalent. Consider, in this respect, partial underparsing. GEN may, in some candidates, realize only part of the numeration. It is trivial that in many cases this gives rise to a candidate whose semantics is different from those candidates in which the entire numeration is realized. The condition of semantic equivalence thus has the consequence that within a candidate set, underparsing is blocked (cf. Ackema and Neeleman, 1997).

There is one exception to this, however. If nothing of the numeration is realized, the null parse results. This candidate, having no structure, is not fed into the interpretational component (or, if it is, it does not receive any interpretation). A plausible view of the condition of semantic equivalence is that it removes from the candidate set those candidates that have a deviating interpretation. As the null parse does not receive an interpretation, it will not be removed from any candidate set. Hence, the null parse is contained in every candidate set.[9]

The null parse does surprisingly well on the constraints discussed so far. The EPP says that VP must be A-bound, so if no VP is projected the EPP is irrelevant. The null parse trivially also satisfies Stay, because it contains no chains. If nothing further were said, we would expect the null parse to be optimal in every language. However, it violates the constraint that says that material from the numeration must be part of the output. This constraint, Parse, is well-known from the phonological literature, but it also plays a role in syntax, as argued by Legendre et al. (1995), Ackema (1995) and Grimshaw and Samek-Lodovici (1995).

Applied to passive inputs, the constraint has the following instantiation:

(14) *Parse (passive)*
Parse passive morphology

Passive morphology is relevant for the interpretation of a sentence, since the verb's external Θ-role is assigned to it. The result is that, although the syntactic subject position is nonthematic in a passive, the verb's external Θ-role is still syntactically 'active' (cf. Jaeggli, 1986; Baker et al., 1989). This means that if passive morphol-

[9] The assumption that the null parse is contained in every candidate set is also made by Grimshaw (1995). This implies that, for Grimshaw too, the condition of equivalent semantics does not not exclude semantically vacuous candidates.

ogy is not parsed, a construction will result that does not have the semantics of a passive and hence is not in the same candidate set. The only candidate that violates (14) and is in the relevant candidate set is the null parse, which belongs to every candidate set.

3. The typology of passive formation

Let us now consider the typology that follows from the constraints introduced above. We will discuss which patterns of passivization are allowed and disallowed under the various rankings of the constraints. It will be shown that each ranking results in a pattern of passive formation that is attested. Moreover, it will be shown that the set of possible patterns forms a subset of the set of logically possible patterns. The derived typology appears to be adequately restrictive.[10]

3.1. No passive

As noted by Siewierska (1984: 23), "there is no doubt that the passive is not a language universal". There are many languages in which it is not attested, either with transitive or with intransitive verbs. Examples mentioned by Siewierska are Tongan, Samoan and Hungarian. Some creole languages, too, are cited as having no passive (compare Hesseling, 1905: 101–102, and Bruyn and Veenstra, 1993: 64ff., on Negerhollands and Kouwenberg, 1994, on the 'marginality' of passive in Berbice Dutch).[11]

One could say that the languages in question simply lack passive morphology, but this is not a very satisfactory account. It is not much more than a restatement of the problem, and although there might be independent reasons for why the passive morphology has been lost in some creole languages (cf. Bickerton, 1988), this is not the case for the noncreoles.

Consider how the existence of languages without passives follows from the constraints discussed above. It must be the case that in these languages the null parse is always optimal if the input contains passive morphology. There are two rankings for which this is true, as we will now explain.

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[10] We will restrict ourselves to passive in nominative-accusative languages. See Legendre et al. (1993) for an optimality-theoretic analysis of passive and antipassive in nominative-accusative as well as absolutive-ergative languages. Legendre et al.'s account is based on constraints that determine which case is assigned to a particular thematic role. We cannot discuss Legendre et al.'s proposals here, but we believe that raising in passives cannot be triggered by the desire of 'high-prominence arguments' to receive nominative, since in many languages certain raised arguments retain their original case (compare dative subjects in Icelandic passives as discussed in Zaenen et al., 1985). The fact that dative is retained can be made to follow, but in order to explain why the NP raises to subject position, the EPP must still be relevant in passives.

[11] This is not to say that in some of these languages there are no constructions in which the external Θ-role is suppressed. However, if this Θ-role is not assigned to passive morphology, but is rather not present in syntax at all (due to some operation on argument structure), the relevant construction does not qualify as a member of the candidate set for passives.

First, if the EPP outranks Parse, there will be no passive derived from an intransitive. With an intransitive there are only two relevant candidates: an impersonal passive and the null parse. The impersonal passive violates the EPP (since it is a subjectless structure, see Section 2.2), but not Parse. The null parse violates Parse, but not the EPP (since no structure is projected, see Section 2.4). Therefore, if satisfying the EPP is more important than satisfying Parse, the null parse wins:

(15)

passive intransitive	EPP	Parse
_V	*!	
☞ 0		*

In the case of a transitive, three candidates must be considered: the null parse, an impersonal passive and a personal passive derived by promotion of the object. If, in addition to the EPP, Stay also dominates Parse, the language in question will lack passives of transitives. The impersonal passive is suboptimal for the reason just discussed in connection to intransitives: the construction is subjectless, which induces a fatal violation of the EPP. The personal passive violates Stay since there is movement of an argument to subject position.

So, if both the EPP and Stay dominate Parse, violations of either are fatal. This leaves the null parse as the optimal candidate. In (16) this is illustrated for one of the two rankings with the relevant characteristic (the other one being EPP >> Stay >> Parse).

(16)

passive transitive	Stay	EPP	Parse
DP_i V t_i	*!*		
_V DP		*!	
☞ 0			*

Summarizing, it can be made to follow from the grammar of a language that it lacks passive morphology. Even if passive morphology is present in the lexicon of such a language, it never surfaces since the candidate that does not parse it is more optimal than the candidates that do. The crucial property of the constraint ranking in such languages is the following:

(17) *No passive*
EPP and Stay >> Parse

3.2. Impersonal passives everywhere

A second type of language has impersonal passives for both intransitive and transitive verbs. Siewierska (1984: 105–108) suggests that Hindi is of this type. Baker (1988: 347–348) argues that the same is true of the Celtic languages Welsh and Irish. Examples are given for Welsh in (18) (from Perlmutter and Postal, 1984) and for Irish in (19) (from McCloskey, 1979).

(18) a. Dannswyd gan y plant
dance-IMP by the children
b. Lladdwyd dyn (gan ddraig)
kill-IMP man by dragon
(19) a. Táthar ag damhsa
be-PRES/IMP dance/prog
b. Marbhadh beirt ar an mbóthar aréir
kill-IMP two people on the road yesterday
c. Marbhadh aréir é/*se
kill-IMP yesterday him/he

Baker argues that the DPs in the (b) and (c) examples above have the properties of objects, not of subjects; note, for instance, the accusative form of the pronoun in (19c). Hence, these sentences are indeed impersonal (subjectless) constructions.

Such languages are accounted for in the following way. First, if Parse outranks the EPP (the reverse of the ranking in languages without passives), an impersonal passive is derived from an intransitive input. Under this ranking, it is better to parse the input than to satisfy the requirement that a subject is present. This is illustrated by the tableau in (20).

(20)

passive intransitive	Parse	EPP
☞ _V		*
0	*!	

If, in addition to Parse, Stay dominates the EPP, impersonal passives are also derived from transitives. Recall that three candidates must be considered. The personal passive does not violate the EPP, in contrast to the impersonal construction. However, it does violate Stay, as opposed to the impersonal passive and the null parse. The null parse is suboptimal compared to the impersonal passive for the same reason as with intransitives: it fatally violates Parse.

The effects of one of the two relevant rankings is illustrated in the tableau in (21) (the other being Stay >> Parse >> EPP).

(21)

passive transitive	Parse	Stay	EPP
DP_i V t_i		*!*	
☞ _V DP			*
0	*!		

Concluding, the rankings that lead to a language with impersonal passives of both transitive and intransitive verbs have the property in (22).

(22) *Impersonal passives everywhere*
Parse and Stay >> EPP

3.3. Personal passives of transitives, impersonal passives of intransitives

We have now seen the effects of four rankings of the three relevant constraints. The two remaining rankings each give rise to yet another pattern of passivization.

Consider a language like Dutch, in which impersonal passives are derived from intransitives and personal passives from transitives:

(23) a. Er werd door Jan gedanst
there was by John danced
b. De boeken werden door Marie verkocht
the books were by Mary sold

In order to get an impersonal passive from an intransitive, Parse must dominate the EPP, as explained in Section 3.2. When considering transitive inputs, this ranking has the effect that the null parse will never be optimal. The decision between the impersonal and the personal passive then is made by the ranking of the EPP and Stay. It should be clear by now that a personal passive can only be derived if the EPP is ranked higher than Stay. If it is more important to have a subject than it is not to move, an argument will raise to subject position:

(24)

passive transitive	Parse	EPP	Stay
☞ DP_i V t_i			**
_V DP		*!	
0	*!		

So, if a language is to have impersonal passives of intransitives and personal passives of transitives, Parse must dominate the EPP and the EPP must dominate Stay. Obviously, there is only one ranking compatible with these demands:

(25) *Personal passives of transitives, impersonal passives of intransitives*
Parse >> EPP >> Stay

3.4. Personal passives of transitives, no passive of intransitives

Finally, consider a language like English, which has personal passives of transitives, but no passive of intransitives:

(26) a. *There was danced
b. John was assassinated

The impossibility of a (impersonal) passive of intransitives indicates that in English, as in languages without any passives, the EPP must outrank Parse. Contrary to languages that lack passives altogether, Parse must dominate Stay in English, so that a passive is derived from a transitive input:

(27)

passive transitive	EPP	Parse	Stay
☞ DP_i V t_i			**
_V DP	*!		
0		*!	

This means that languages of the English type are characterized by the total ranking in (28).

(28) *Personal passives of transitives, no passive of intransitives*
EPP >> Parse >> Stay

We have now discussed each of the six possible rankings of the constraints we have proposed. In each case, a grammar results with a pattern of passive formation that is instantiated by some languages. There are not six different patterns however, since two patterns are optimal under two different rankings. This is an illustration of the general fact that n constraints, although they can be ranked in n! ways, do not necessarily give rise to n! different types of language. The fact that optimality theory allows for a restrictive language typology is further illustrated by the fact that

some logically possible patterns are ruled out under any ranking, as we will now argue.

3.5. What is impossible

Not every logically possible pattern of passive formation can be derived under reranking of the proposed constraints. In particular, the following generalizations follow from the constraints and their interaction:

(29) a. No language has impersonal passives of transitives without having (impersonal) passives of intransitives
b. No language has (impersonal) passives of intransitives without having some type of passive of transitives

Consider why. Concerning (29a), if a language has impersonal passives of transitives, Parse must outrank the EPP: it is more important to parse a passive input than it is to have a subject. Not having a passive of intransitives requires that the EPP outranks Parse (see Section 3.1). Obviously, these demands are incompatible. The same line of reasoning applies to (29b). If a language has passives of intransitives, Parse must dominate the EPP. But if this is so, the input of a passive transitive will also be parsed. (Whether we will get a personal or an impersonal passive then depends on the ranking of Stay and the EPP with respect to each other.)

4. Conclusion

Above, we have illustrated that from the various rankings of three constraints a variation in passive formation follows that appears to be adequate as a basic typology. These three constraints are not novel. The EPP is familiar from GB-theory, Stay equals constraints proposed to minimize overt movement (like the minimal link condition and procrastinate in the minimalist program, cf. Chomsky, 1995) and Parse is implicitly present in any theory (since in any theory it must be assumed that information is maintained throughout a derivation or from one level of representation to another). The advantages of allowing these constraints to conflict are the following. First, the constraints themselves can be formulated in the most general way. Second, the system gives rise to a language typology, without requiring additional statements about parametrization. Third, it is empirically problematic to assume that a constraint either holds absolutely or not at all in a particular language. Above we have discussed languages in which the EPP is violated in passives of intransitives, but must be satisfied in passives of transitives (see Sections 2.2 and 3.3). In parameter theory, this cannot be readily explained. If the EPP is itself a parameter, it should hold or not hold throughout a language. Therefore, the facts can only be explained if subparameters are assumed which explicitly mention the domain of application of the EPP in a language, obviously an undesirable result.

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